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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
TON, ANTHONY T	
ART UNIT	**PAPER NUMBER**
2661	5

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/759,848	YOUNG ET AL.	
	Examiner	Art Unit	
	Anthony T Ton	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 January 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1, 2, 4, 5, 7, 9, 11, 12, 14, 17, 19-21, 23, 24, 26 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kanamaru et al** (US Patent No. **6,574,197**) in view of **Sturniolo et al** (US Patent No. **6,154,461**).

(a) **In Regarding to Claim 1**: **Kanamaru et al disclosed** in a communication network including a subnetwork coupled to a backbone network, said subnetwork including an access point (AP) and a plurality of clients associated with said AP *(see Figs.1 and 12)*, a method of exchanging network information, comprising steps of:

a) automatically monitoring network status of said AP on a continual basis over said communication network *(see col.2 lines 23-28: a network monitoring device (AP, for sending responsive to a monitoring packet to the neighbor node downstream)*,

said AP coupled to said backbone network *(see Fig.12: Node C1 coupled to backbone 1 via CPU A3)*;

b) automatically and dynamically generating network status information for said AP based upon step a) *(see col.23 lines 28-55);*

c) automatically sending said network status information for said AP to each of said plurality of clients when there is a change in said network status of said AP *(see col.23 lines 50-56: broadcasts a NOTIFY packet).*

Kanamaru et al failed to explicitly disclose a plurality of clients coupled wirelessly to the AP.

Sturniolo et al. disclosed such a plurality of clients coupled wirelessly to the AP (*see Fig.1: AP1 and MTs 36)*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a plurality of clients coupled wirelessly to the AP of Sturniolo et al throughout network as taught by Kanamaru et al so that wireless terminals can be used in a wired backbone network, **the motivation being** wired and wireless terminals can be operating in a hybrid network system.

(b) **In Regarding to Claim 2**: **Kanamaru et al further disclosed** wherein said change of network status in step c) includes a failed communications link between said AP and said backbone network *(see col.7 line 48-61: Node P1 (AP) breaks away from the network 11 (backbone) because of power-down or a failure).*

It would have been obvious to combine Kanamaru et al and Sturniolo et al for the same reason as described in Claim 1.

(c) **In Regarding to Claim 4**: **Kanamaru et al further disclosed** the method comprising the further step of: d) automatically sending said network status information for said AP to a first client of said plurality of clients when said first client is newly associating with said AP *(see col.3 lines 1-6: monitoring device belongs newly participates).*

It would have been obvious to combine Kanamaru et al and Sturniolo et al for the same reason as described in Claim 1.

(d) **In Regarding to Claim 11**: This claim is rejected for the same reasons as Claims 1 and 4 because the method in Claims 1 and 4 can be used to practice the method steps of this Claim.

(e) **In Regarding to Claim 5**: **Kanamaru et al further disclosed** wherein a smart agent implements said steps a), b), c) and d), said smart agent located in said AP *(see Fig.1: a combination of components located inside the Node P1 (AP) can be considered as a smart agent).*

It would have been obvious to combine Kanamaru et al and Sturniolo et al for the same reason as described in Claim 1.

(f) **In Regarding to Claim 12**: This claim is rejected for the same reasons as Claims 1, 4 and 5 because the method in Claims 1, 4 and 5 can be used to practice the method steps of this Claim.

(g) **In Regarding to Claim 14**: This claim is rejected for the same reasons as Claims 1, 4 and 2 because the method in Claims 1, 4 and 2 can be used to practice the method steps of this Claim.

(h) **In Regarding to Claim 7**: **Kanamaru et al disclosed** all aspects of this claim as set forth in Claims 1 and 4.

Kanamaru et al failed to explicitly disclose wherein said first client, before associating with said AP, does not have any current association with any AP or any subnetwork, nor any IP address.

Sturniolo et al. disclosed such a first client, before associating with said AP, does not have any current association with any AP or any subnetwork, nor any IP address *(see col.11 lines 8-29: the newly registered mobile terminal 36).*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a first client, before associating with said AP, does not have any current association with any AP or any subnetwork, nor any IP address of the Sturniolo et al throughout network as taught by Kanamaru et al in so that an AP can maintain connectivity with other client efficiently, **the motivation being** to save memory in database of an AP in a purpose of communication effectively with other currently connected clients to such an AP.

(i) **In Regarding to Claim 17:** This claim is rejected for the same reasons as Claims 1, 4 and 7 because the method in Claims 1, 4 and 7 can be used to practice the method steps of this Claim.

(j) **In Regarding to Claim 9**: **Kanamaru et al further disclosed** wherein said steps c) and d) are implemented through a layer 2 communication protocol *(see col.8 lines 52-64: ATM can be implemented using plurality of network devices; and see col.14 lines 52-61: ATM or Ethernet. Hence, layer 2).*

It would have been obvious to combine Kanamaru et al and Sturniolo et al for the same reasons as described in Claims 1 and 4.

(k) **In Regarding to Claim 19:** This claim is rejected for the same reasons as Claims 1, 4 and 9 because the method in Claims 1, 4 and 9 can be used to practice the method steps of this Claim.

(l) **In Regarding to Claims 20, 21, 23, 24, 26 and 28**: The claimed subject matters of the limitations disclosed in the claims 1, 2, 4, 5, 7 and 9 are the same as in these Claims, respectively. Therefore, the rejections in the claims 1, 2, 4, 5, 7 and 9 would apply to these claims in a computer system as taught.

3. **Claims 3, 6, 10, 15, 16, 18, 22, 25 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kanamaru et al** (US Patent No. **6,574,197**) in view of **Sturniolo et al** (US Patent No. **6,154,461**) as applied to Claim 1 above, and further in view of **Forslow** (US Patent No. **6,608,832**)

(a) **In Regarding to Claim 3**: **Kanamaru et al disclosed** all aspects of this claim as set forth in Claim 1.

Kanamaru et al failed to explicitly disclose the change of network status in step c) includes a change of IP address for an electronic device taken essentially from the group consisting essentially of: said AP, a mask associated with said subnetwork, and a gateway associated with said subnetwork.

Forslow disclosed such a change of IP address for an electronic device taken essentially from the group consisting essentially of: said AP, a mask associated with said subnetwork, and a gateway associated with said subnetwork *(see col.19 line 45-col.20 line 7: subnet mask, gateway IP address, IP address).*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such wherein said change of network status in step c) includes a change of IP address for an electronic device taken essentially from the group consisting essentially of: said AP, a mask associated with said subnetwork, and a gateway associated with said subnetwork of Forslow throughout the network as taught by Kanamaru et al to maintain the state of connectivity to a mobile unit when it is roaming from a subnetwork to another subnetwork, **the motivation being** to provide seamless roaming options to mobile units.

(b) **In Regarding to Claim 15:** This claim is rejected for the same reasons as Claims 1, 4 and 3 because the method in Claims 1, 4 and 3 can be used to practice the method steps of this Claim.

(c) **In Regarding to Claim 6**: **Kanamaru et al disclosed** all aspects of this claim as set forth in Claims 1 and 4.

Kanamaru et al failed to explicitly disclose a first client has previously associated with a second AP, said first client having an IP address associated with a second subnetwork, said second subnetwork including a second mask, a second gateway, and said second AP.

Sturniolo et al. did not explicitly disclose the first client having an IP address associated with a second subnetwork, said second subnetwork including a second mask, a second gateway, and said second AP in his roaming among multiple network.

However, Sturniolo et al. clearly disclosed a relationship between a gateway (AP) in a second network and a mobile terminal (first client) that previously associated with the gateway; such a terminal having network address and port address of the gateway. Hence, if the mobile is being operating in TCP/IP protocol networks, the second network would include a second mask, a second gateway, and said second AP as recited in the instant claim.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a first client having an IP address associated with a second subnetwork, said second subnetwork including a second mask, a second gateway, and said second AP in his roaming among multiple network of the instant claim throughout the network as taught by Kanamaru et al to and Sturniolo to maintain the state of connectivity to a mobile unit when it is roaming from a subnetwork to another subnetwork, **the motivation being** to utilize a mobile unit roaming more efficiently.

(d) **In Regarding to Claim 16:** This claim is rejected for the same reasons as Claims 1, 4 and 6 because the method in Claims 1, 4 and 6 can be used to practice the method steps of this Claim.

(e) **In Regarding to Claim 10**: **Kanamaru et al disclosed** all aspects of this claim as set forth in Claims 1 and 4; and further disclosed AP link status to said backbone network *(see col.5 lines 8-18)*.

Kanamaru et al failed to explicitly disclose wherein said network status information is taken from a group consisting essentially of: AP Internet Protocol (IP) address; AP IP address type; subnet mask information; subnet mask IP address; and subnet gateway information; subnet gateway IP address *(see col.19 line 45-col.20 line 47)*.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such wherein said change of network status in step c) includes a change of IP address for an electronic device taken essentially from the group consisting essentially of: said AP, a mask associated with said subnetwork, and a gateway associated with said subnetwork of Forslow throughout the network as taught by Kanamaru et al to maintain the state of connectivity to a mobile unit when it is roaming from a subnetwork to another subnetwork, **the motivation being** to provide seamless roaming options to mobile units.

(f) **In Regarding to Claim 18:** This claim is rejected for the same reasons as Claims 1, 4 and 10 because the method in Claims 1, 4 and 10 can be used to practice the method steps of this Claim.

(g) **In Regarding to Claims 22, 25 and 29**: The claimed subject matters of the limitations disclosed in the claims 3, 6 and 10 are the same as in these Claims, respectively.

Therefore, the rejections in the claims 3, 6 and 10 would apply to these claims in a computer system as taught.

4. **Claims 8, 13 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kanamaru et al** (US Patent No. **6,574,197**) in view of **Sturniolo et al** (US Patent No. **6,154,461**) as applied to Claims 1 and 4 above, and further in view of **Engwer et al** (US Patent Application Publication No. **2003/0193895**)

(a) **In Regarding to Claim 8**: **Kanamaru et al** and **Sturniolo et al disclosed** all aspects of this claim as set forth in Claims 1 and 4.

Kanamaru et al failed to explicitly disclose wherein said access point, said plurality of stations, and said smart agent are substantially compliant with a version of the IEEE 802.11 communications protocol.

Engwer et al further disclosed such a smart agent is substantially compliant with a version of the IEEE 802.11 communications protocol *(see page 2 section [0026]: a standardized protocol such as the IEEE 802.11 protocol)*.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a smart agent is substantially compliant with a version of the IEEE 802.11 communications protocol of the Engwer et al throughout network as taught by Kanamaru et al so that a data structure of a control frame can be sent to wireless terminals to maintain connectivity between the AP and the wireless terminals, **the motivation being** to control connectivity of wireless terminals more efficient.

(b) **In Regarding to Claim 13:** This claim is rejected for the same reasons as Claims 1, 4 and 8 because the method in Claims 1, 4 and 8 can be used to practice the method steps of this Claim.

(c) **In Regarding to Claim 27**: The claimed subject matters of the limitations disclosed in the claim 8 are the same as in this Claim. Therefore, the rejections in the claim 8 would apply to this claim in a computer system as taught.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony T Ton whose telephone number is 703-305-8956. The examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on 703-305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ATT
5/17/2004

Primary Ex.
Phirin Sam